

"APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R001444

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CIA-RDP86-00513R0014449

REEL #465

RIVES, Z.

S/023/60/009/01/006/011
D031/D003

AUTHOR: Riives, Z.

TITLE: The Projection Properties of the Orthocentric Tetra-
hedron

PERIODICAL: Izvestiya Akademii nauk Estonskoy SSR, Seriya tekhnicheskikh i fiziko-matematicheskikh nauk, 1960,
Volume IX, Nr 1, pp 69 - 74 (USSR)

ABSTRACT: On the basis of lemmas on the properties of orthocentric tetrahedrons, the author proves the proposition: Each perfect square A'B'C'D' and the line D'D', connecting the vertex with any interior point of the triangle formed by the 3 remaining points or with one of the points belonging to the vertex corners of the triangle's inner corners, and point H' of the straight line D'D'₁, can be treated as a parallel projection of the orthocentric tetrahedron ABCD, its height DD₁ and of the orthocenter H (Fig 2). On the basis of ✓

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S/023/60/009/01/005/011
D031/D003

The Projection Properties of the Orthocentric Tetrahedron

the proposition, the following can be determined:
1) the existence field of the orthocenter's projection of the orthocentric tetrahedron, 2) the existence field of the center O projection of the circumscribed sphere of the orthocentric tetrahedron when the projection of the tetrahedron is given.
There are 7 diagrams and 4 references, of which 3 are Soviet and 1 French.

ASSOCIATION: Moskovskiy aviatsionnyy institut (Moscow Aviation Institute)

SUBMITTED: October 12, 1959

Card 2/2

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001444"

RECORDED BY: [REDACTED]
RECORDED ON: [REDACTED] 19[REDACTED]

100-200, Vol. 22, 2001.

RECORDED BY: [REDACTED]

100-200, Vol. 22, 2001.

RECORDED ON: [REDACTED] 19[REDACTED]

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0014449

PRIJAVEC, FRANJA

A new method for the preparation of thiocarbamide from calcium cyanamide? Franja Rijavec and Svetislav Zivancvic (Inst. za tretivanje materijala, Beograd, Yugoslavia). Hemika ind. 10, 181-2 (1958). A H₂O suspension of finely ground As sulfide ore, such as realgar or auroargentite, contg. a small excess of added S (5%), was mixed in an open glass or Pt vessel with CaCN, the ratio of N in CaCN to S in the ore being 1:1. After heating at approx. 90° for ~1 hr., with stirring, filtering, washing the ppt., and neutralizing the filtrate with H₂SO₄, the ppd. sulfide was filtered off. The thiocarbamide filtrate was evapd. *in vacuo* to initial crystn., and left to crystallize; the crystals were filtered off the mother liquor and then purified by recrystn. or by sublimation *in vacuo*. The yield, based on total N in CaCN, is 80-90%. N. Pavlic

fra amf

RJAVEC FRANJA

A new method for the preparation of thiocarbamide from calcium cyanamide.¹ Franja Rijavec and Svetislav Živanović (Inst. Ispitivanje materijala, Beograd, Yugoslavia).² ³
g Hemiska Ind. 10, 161-2 (1956).—A H₂O suspension of finely ground As sulfide ore, such as realgar or auripigment, contg. a small excess of added S (5%), was mixed in an open glass or Fe vessel with CaCN₂, the ratio of N in CaCN₂ to S in the ore being 1:1. After heating at approx. 90° for 1/2 hr. with stirring, filtering, washing the ppt., and neutralizing the filtrate with H₂SO₄, the pptd. sulfide was filtered off. The thiocarbamide filtrate was evapd. *in vacuo* to initial crystn. and left to crystallize; the crystals were filtered off the mother liquor and then purified by recrystn. or by sublimation *in vacuo*. The yield, based on total N in CaCN₂, is 80-90%. N. Playfie

RIJAVEC, Franjo, hem.

Montenegrin bentonite, and problem of its use in founding.
Livarstvo 9 no.45/46:33-41 Ja-Mr '62.

1. Institut za ispitivanje materijala NRS, Beograd.

Rijavec, Franjo

✓ New potassium-fertilizer "Liskal" and potassium-phosphorus fertilizer "Liskaphos." Stevan Nikolić, Đurđe B. Jelenić, and Franjo Rijavec (Poljoprivredni Fak., Žemalje, Biljka 2, 417-30(1953). Liskal was prepd. by heating a muscovite ($H_2KAlSi_3O_8$) at 900° in the presence of $CaCO_3$, and grinding it to a fine powder. It contained 4.4% water-sol. K_2O . To increase the fertilizing value of Liskal, the same muscovite was treated with a Dalmatian phosphorite, and a binary K and P product "Liskaphos" obtained, contg. acid-sol. P_2O_5 10.95-13.95 and water-sol. K_2O 4.58-5.22%. The strong fertilizing action of both Liskal and Liskaphos was proved by numerous tests on oats planted in chernozem and podzol. The application of Liskal in pots and in field brought an increase in yield of oats comparable to that obtained by the application of concd. K salts, contg. 40% K_2O . Liskaphos was applied only in pots and its fertilizing action was found to be comparable to that obtained by applying a mixt. of superphosphates with K salts contg. 40% K_2O . S. B.

3
April

RECORDED IN THE CITY OF PHILADELPHIA, PENNSYLVANIA, ON THE 1ST DAY OF APRIL, 1947, BY WALTER J. FRAZER, PHOTOGRAFHER, 100, 1/2 S. 15TH ST., PHILADELPHIA, PENNSYLVANIA.

AND IN THE CITY OF NEW YORK, NEW YORK, ON THE 1ST DAY OF APRIL, 1947, BY WALTER J. FRAZER.

ZIVANOVIC, Svetislav B. ing.; RIJAVEC, Frana, hemicar; HAJDUKOVIC,
Jozef

The development of the exploitation and refining of the graphite
of Pakrac, Kem ind 10 no.5:137-141 My '61.

1. Savetnik, UVTI, Beograd (for Zivanovic). 2. Saradnik Instituta
za ispitivanje materijala NRS, Beograd (for Rijavec). 3. Tehnicki
rukovodilac Slavonskih rudnika nemetala, Pakrac (for Hajdukovic).

SURNAME (in caps); Given Names

Country: Yugoslavia

Academic Degrees: /not given/

Affiliation: Institute for Biology of the University of Zagreb, Department
of Physiology and Biochemistry (Institut za biologiju
xxxxxxxx Sveucilista u Zagrebu, Odjel za fiziologiju i biohemiju), Zagreb

Source: Belgrade, Veterinarski glasnik, No 7, 1961, pp 602-606.

Data: "On the Possibility of Treatment of Teaniasis in Dogs and Hens
with Yomesan."

Authors:

RIJECIĆ, R.
RIJEVEC, M.

MILAVIC, Marija; VUKIĆ, Branka; EHRLICH, Ivo

Consumption of serum albumins in vitro by *Fasciola hepatica*.
Biol glas 19 no.2:103-107 '62.

1. Biologisches Institut der Universität, Zagreb.
2. Glas Hrvatska, "Biološki glasnik. Periodicum Biologorum"
(for Ehrlich).

RIJIKOVA, S.

Sources of microseisms recorded in Sofia. Doklady BAN 17 no.7: '64.

1. Submitted by Academician L. Krustanov, Chief Editor, "Doklady Bolgarskoy Akademii nauk".

SHIBATA, S.; KIKUCHI, S. (ed.)

Seismic bulletin of the Sofia Seismologic Station;
January-December 1961. Bull seismique Sofia 5-47 '61
(publ. '63)

RIJOW, W.P.

"Recherches sur l'influence des catalyseurs et anticatalyseurs sur la cinetique et le mecaniste de l'oxydation de l'anhydride sulfureux par l'ozone". Kachtanow, L.I. et Rijow, W.P. (p. 732)

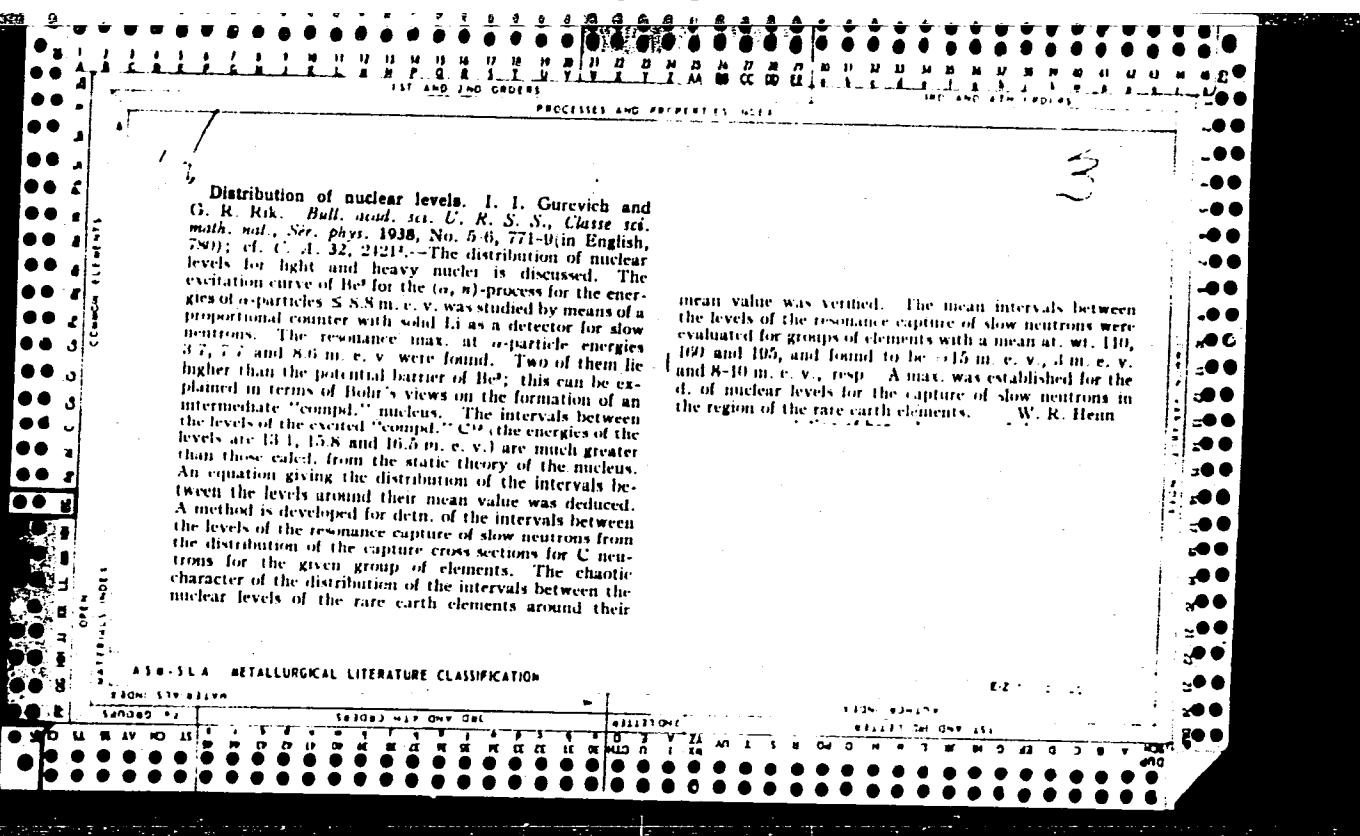
SO: Journal of General Chemistry. (Zhurnal Obshchei Khimii) 1936, Vol. 6, No. 5.

Rik, G.F.

✓ Potassium isotope proportion in meteorites. G. P. Rik
and Yu. A. Shukolyukov (A. A. Zhdanov State Univ,
Leningrad). *Doklady Akad. Nauk S.S.R.* 94, 687-0
(1954).—The K-isotope proportion of 3 meteorites was detd.
mass-spectroscopically. The eucritic type Podvarinskaya
meteorite of 1929 showed distinct indications of recrystall.
and its age, detd. by the Δ method, was 1000×10^6 years.
Two chondritic type meteorites, the Ochansk (1887) and
Elenovka (1951), were 4000×10^6 years old by the Δ
method. A sample of muscovite from N.W. Russia was
taken as a standard of comparison. Close to 173 measurements
were made on the meteorites and 75 on the standard.
The $K^{41}:K^{40}$ ratios in the meteorites and muscovite were
found to be identical within the exptl. error limits.
W. M. Sternberg

62

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Volume 4 Subject

569

1957-1958 USA
The Electron-Optical Properties of the Magnetic
Tube (Electron Multiplier) of Kubetski. G. B. Kubetski
and A. I. Tikhonov. U.S.S.R. Sov. Akad. Nauk. Vses. Inst.
tekhnicheskogo i prirodoznan. Issled. po fiz. i mat. v SSSR. No. 10, 1958. (In Russian.) A detailed inves-
tigation of the results obtained by means of the method of the equipotential lines of the electric field and the
electron trajectories in the region of the cathode arc
carried out. The absence of an acceleration field in ar-
c discharge and the lack of coordination between the
two fields result in a useless dispersion of a large
number of photoelectrons. The curves of focusing in
the longitudinal direction are shown. The variation
of the size of the emitting rings (they become wider
when from No. 12 ring) is not adjusted to the
standard gradient of the magnetic field with the
resulted further dispersion of electrons. Electron
trajectories near the anode are shown.
The diffusion of the magnetic field in this
region obstructs the collection of electrons at the
anode. The general conclusion reached is that
the optical properties of the tube are rather
poor but that they could be improved by modifying
the operating conditions and altering certain
structural details. See also 568 below.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 261 - I

BOOK

Call No.: AF595007

Author: RIK, G. R.

Full Title: MASS SPECTROSCOPY

Transliterated Title: Mass-spektroskopiya

Publishing Data

Originating Agency: None

Publishing House: State Publishing House of Technical and Theoretical Literature

Date: 1953

No. pp.: 296

No. of copies: 5,000

Editorial Staff

Editor: None

Tech. Ed.: None

Editor-in-Chief: Lukirskiy, P. I., Academician

Appraiser: None

Text Data

Coverage: Mass spectroscopy is generally related to the method of determination of mass and of relative content of isotopes in certain specimens. The book contains a review of the essential information on mass spectroscopy, spectrography, and spectrometry obtained before 1952. Basic theories, typical apparatuses and methods of analysis are described from the point of view of their application to physical, chemical, geochemical, metallurgical, agricultural and other problems. Nuclear phenomena are analytically formu-

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AID 261 - I

Mass-spektroskopiya

lated and ion motion and field forces are graphically illustrated. Modern apparatuses and their operation are described with diagrams and sketches. Two tables of isotopes mass, doublets of mass, and 14 photographs of mass spectors, copied mainly from non-Russian literature, are given, in the Appendix (p. 270-296).

This book is based predominantly on the work and publications of non-Russian scientists.

Purpose: General information for readers having no special knowledge of nuclear physics, but familiar with general physics and high mathematics.

Facilities:

- | Page | |
|------|---|
| 48 | G. A. Grinberg developed configuration of equapotential surfaces. |
| 48 | V. Lukoshkov worked out convenient methods of graphoanalytical construction of the paths of charged particles in an electric field. |
| 185 | M. Meshcheryakov found isotopes He ⁵ in helium in ratio not exceeding 1/10 ⁶ . |
| 185 | V. Khlopin and Ye. Gerling established that helium of radioactive origin does not contain helium isotopes of mass 3. |

2/3

Mass-spektroskopiya

AID 261 - I

- Page
186 D. Alkhazov and A. Murin used linear acceleration of mass-spectroscopical processes.
186 A. P. Grinberg developed the theory of the linear accelerator.
200 L. I. Mandel'shtam and N. D. Papaleksi introduced the parametric method of modulation of current (Dynamic electrometer).
203 L. A. Kubetskiy developed photo-electric multimeter for the registration of weak light flux.
248 A. P. Vinogradov indicated the significance of isotope of oxygen (O_{18}) as the indicator for geochemical processes.
250 G. A. Shayn found that carbon in atmosphere of the "carbon stars" is much richer in heavy isotope C_{13} than a carbon of our earth.
250 A. V. Trofimov studied carbon isotopes in 39 meteorites of different types.

No. of Russian and Slavic References: 38 out of 200
Available: A.I.D., Library of Congress.

3/3

R.R., G.R.

✓ Problem of variation of the isotopic composition of lead ore. G. R. Rik and G. V. Avdeenko. *Doklady Akad Nauk SSSR*, 90, 829-831 (1953). A study was made of the isotopic compn. of samples of Pb ore for which it is possible not only to state an age accurately but also to take into account geol. data. Analysis of compn. of isotopic compn. of Pb ore was made with a sector mass-spectrometer for Pb^+ obtained by ionization of PbI_4 vapors by flow electrons. Vaporization of PbI_4 was carried out inside the ionic source at 800°. Accuracy of detn. of isotopic compn. was $\pm 1\%$. All possible sources of systematic error of the app. were considered. Reagents used for prepns. of the PbI_4 were checked for absence of Pb and Br. Hg ions were practically absent ($Hg^{m1}/Pb^{m1} = 5 \times 10^{-10}\%$). As a result

of the analyses it was concluded that a large portion of the Pb ore is of radiogenic origin. Data are tabulated in 3 tables.
Gladys S. Macay

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Rik, G. R.

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2505. THE ISOTOPE COMPOSITION OF POTASSIUM FROM

METEORITES. G.R.Rik and Yu.A.Shukolyukov.

Dokl. Akad. Nauk SSSR, Vol. 94, No. 4, 687-9 (1954). In Russian.

Mass-spectrograph analyses of a number of elements found in meteorites have given isotope compositions within the variations found for terrestrial specimens of those elements. Potassium of meteorite origin does not appear to have been previously studied with a mass spectrograph. Experimental details are outlined and

discussed critically. Some 70-100 determinations of the K^{40} : K^{41} ratio were carried out for each of three meteorites and a value of 14.4 ± 0.1 (0.07% error) was found. A determination of the ratio K^{40} : K^{41} for one meteorite also gave the same value as for K of terrestrial origin.

C.R.S.Manders

RE

pmf
JL

Rik, G. R.

A photoregistration camera for the mass spectrometer
MS. G. R. Rik, L. M. Krizhanski, and A. N. Dobronravova.
Zhurn. Tekh. Ekspеримента 1936, No. 2, 90-1.
Described is an universally photoregistering camera for mass
spectrometers of the type MS. It allows one to obtain an
exposure of the mass spectrum under simultaneous control
of the intensity of one of the lines of the spectrum and of the
electrometer circuit. A removable adapter is provided, so
that the plates can be exchanged without any interruption of
the run of the mass spectrometer. Werner Jacobson

20
Plates

21
Plates

22
Any

Radiotekhnika i elektronika V. G. Khlopin, AS USSR

RTK, G. R.

27
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7
484j

The emission of copper ions from ion-exchange resins
G. R. Ruk, Priibory i Tekhnika Eksperimenta 1950, No. 3,
p. 9. The method used for producing thermal ions by Pan-
chukov, et al. (C.A. 50, 75426) is applied successfully to
produce ions of Cu, Zn, and Co. For Cu ions the resin
must be heated to about 1300° over a period of 30 min.
As little as 20 γ of Cu can be analyzed. Werner Jacobson

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RIK, G.R.

27
✓ Isotopic composition of lead of some rocks and the galena connected with them. A. V. Rabinovich, G. R. Rik and M. N. Goluchina. All-Union Sci. Research Geological Inst., Leningrad. Geokhimiya 1956, No. 7, 65-8. A study of isotopic compn. of Pb in 14 samples of rocks and 5 samples of galenas. Pb was red. by the method of Novikov and Chalkina (Vsesoyuz. Nauch.-Issledovatel. Geol. Inst., Informatsion. Sbornik 1955, No. 2). A current of electrolytic H₂ was passed over 15-20 g. samples of rock or mineral for 6-7 hrs. at 1050-1100°. The Pb in the sample was reduced and deposited as a metallic ring in the cold part of the tube. Spectral analysis showed that the ring also contained Si, Zn, Ti, Ca, and Mg, depending on the compn. of the rock. Isotopic separ. of Pb did not occur at temps. of 1050-1100°, but proceeds only at low temps. Results of analyses of isotopic compn. of Pb of galenas and of the rocks are presented.

Gladys S. Macy

KR
MTT

✓ na

H.A.J. H.K.

PAGE 1 EACH EXPIRATION 20/363

Kravitz, Leon S. *Social Psychology*. Institute
of Psychology, Indian Institute of Technology, Madras, India.
Vol. 1, 1951. 140 pp. 12m. P. Kannan M.P. Interprint.
1951. 1st edition.

Ed.: J. A. Patterson. Editor of Physical and Mathematical Sciences Ed. of Publishing
House: G.S. Govt. Print. Off. Ed.: A.W. Salter, etc.

PROBLEMS: The author is interested for physiologist,
Cytology. The book represents volume 9 of the Transactions of the Indian Institute
of Psychology. The author is interested at the Institute entirely from
1951 to 1959. There are a number of articles which during this period
published in connection with previous work of the author. The study of cellular
functions occurring with particular reference particularly to the subject of
cellular metabolism and other functions of cells in normal condition and
during disease (cancer) and other processes affected due to
various factors. The faculty of the Institute
are interested in these fields. One author provided a complete
description of the functions of epithelial and of two types of bone cells
and their relationship to each other. Some biological and physiological
problems are also discussed.

PROBLEMS: The author is interested in the field of psychology, particularly in
the field of social psychology, study of the Indian culture, CAI, etc.
Biology, psychology, etc. particularly in the field of psychology, etc.
etc. The author is interested in the field of psychology, etc. particularly in
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the field of psychology, etc. particularly in the field of psychology, etc.

RIK, G.R.; RUSANOV, A.I.; STEPANOV, S.I.

Photographic action of slow ions. Trudy Radiev.inst.AN SSSR 9:
238-249 '59. (MIRA 14:6)
(Photographic emulsions) (Photography, Particle track)

VOLKOV, G.A.; RIK, G.R.

On the problem of α -dosimetry in marginal region of heterologous
media. Biofizika 5 no.1:60-68 '60. (MIRA 13:6)
(RADIOMETRY)

LYALIN, O.O.; RIK, G.R.

Use of tagged atoms in studying the root nutrition of plants.
(MIPA 14:6)
Biofizika 6 no.3:357-362 '61.

1. Agrofizicheskiy nauchno-issledovatel'skiy institut Vsesoyuznoy
akademii sel'skokhozyaystvennykh nauk imeni Lenina, Leningrad.
(PLANTS—ASSIMILATION) (CARBON—ISOTOPES)
(PHOSPHORUS—ISOTOPES)

RIM, V. N.

Dissertation defended for the degree of Doctor of Physicomathematical
Science at the Institute of Theoretical and Experimental Physics 1962:

"Investigations in Mass Spectroscopy."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-125

RIK, G.R.; PETROVA, O.H.; MISYUK, L.A.; PLATONOV, L.V.

Study of the shift in isotope make-up of the elements Sr, Rb,
Ca, K and Li in their assimilation from the nutrient medium by
plants. Biofizika 6 no.6:740-744 '61. (MIRA 15:1)

1. Agrofizicheskiy nauchno-issledovatel'skiy institut Vsesoyuznoy
akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina, Leningrad.
(PLANTS ASSIMILATION) (ISOTOPES)

VOLKO, G.A.; RIK, G.R.

Energy spectra observed in the passage of beta radiation through various substances. Dokl. AN SSSR 140 no.1045-1047 O '61.
(MIRA 15:2)

1. Agrofizicheskiy nauchno-issledovatel'skiy institut Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina.
Predstavлено академиком V.N.Kondrat'yevym.
(Radioisotopes—Spectra)
(Beta rays)

GEMLING, Ye. K.; RIK, K. G.; Profs.

Argon

Age of stone meteorites by the argon method. Meteoritika No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, _____ June 1953, Uncl.

RIK, K. G.

Dissertation: "Determination of Age of Stone Meteorites by the Argon Method." Cand Chem Sci, Leningrad State U, Leningrad, 1954. Referativnyy Zhurnal--Astronomiya, Moscow, May 54.

SO: SUM 284, 26 Nov 1954

GURLING, E.K., professor; RIK, K.G.

Recent results in determining the age of stone meteorites by the argon method. Meteoritika no.11:117-120 '54. (MIRA 8:3)
(Meteorites) (Argon)

GERLING, E.K.; RIK, K.G.

Forms of argon occurrence in meteorites. Meteoritika no.13:15-18 '55.
(Argon) (Meteorites) (MLRA 9:2)

Rik, K. G.

USSR/Astronomy - Argon method

Card 1/1 Pub. 22 - 10/49

Authors : Gerling, E. K., and Rik. K. G.

Title : Determining the age of stony meteorites by the argon method

Periodical : Dok. AN SSSR 101/3, 453-455, Mar 21, 1955

Abstract : Results of determining the age of 18 stony meteorites by the argon method are presented. Five references: 3 USSR and 2 English (1951-1954). Table.

Institution : Academy of Sc., USSR, The Laboratory of Pre-Combrian Geology

Presented by : Academician A. G. Betekhtin, December 20, 1954

RIK, K. G

USSR/Astronomy - Meteorites

Card Pub. 22 - 15/54

Authors : Trofimov, A. V., and Rik, K. G.

Title : About isotopes of meteoric argon

Periodical : Dok. AN SSSR 102/5, 911-914, June 11, 1955

Abstract : Various theories all discussed for an explanation of the presence of rare argon isotopes, A^{36} and A^{38} , in meteorites. Seven references: 2 USA, 2 French and 3 USSR (1952-1955). Tables.

Institution : The Acad. of Sc., USSR, V. I. Vernadskiy Institute of Geo. and Analytical Chemistry

Presented by : Academician A. P. Vinogradov, February 12, 1955

GERLING, E.K.; RIK, K.G.

Recent aspects of determining the age of meteorites. Meteoritika
no.14:54-61 '56. (MIRA 10:1)
(Meteorites)

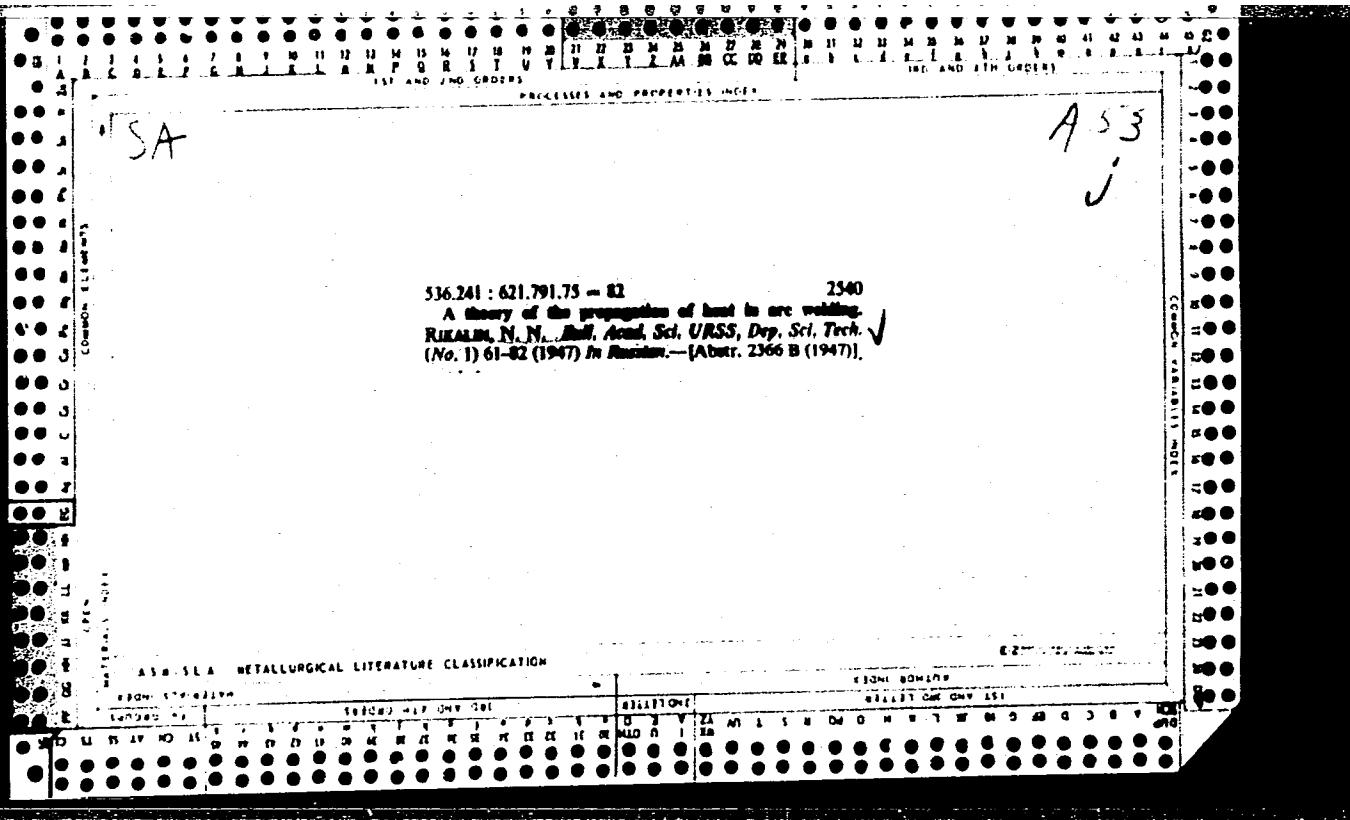
UVAROVA, E.I.; RIK, V.M.

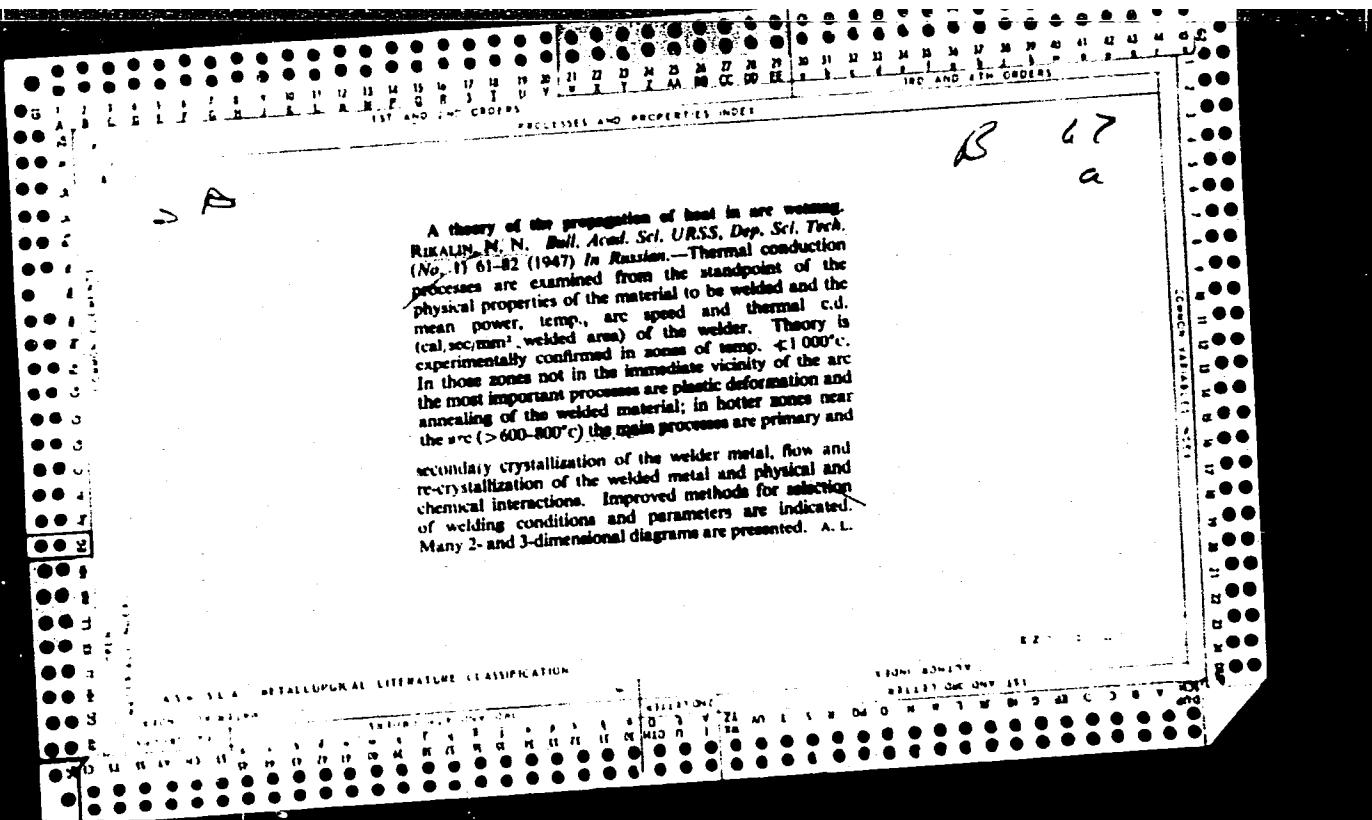
Complexometric method for determining molybdenum in catalysts.
Khim. i tekhn. topl. i masei 9 no.5 87-69 5 My'64 (MIRA 1737)

RIKALEWA, A.M.

"Partage des dicetopiperazines et des amino-acides dans les hydrolyses des matieres proteiques par la methode du ionophorese. Communication II". Balaboukha-Popzowa, W.F., Gawrilow, N.I. et Rikalewa, A.M. (p. 791)

SO: Journal of General Chemistry. (Zhurnal Obshchei Khimii) 1936, Vol. 6, No. 6.





RIKALIN, N.N. (Szovjetunio)

Machining of structural materials by concentrated power currents.
Technika 9 no.2:2 F '65.

RTKARDO, D., dotsent; BOGOLYUBOVA, G., dotsent; KEROV, M.; ZOLOTINA, V.;
SHISHOVA, I.

Seventieth birthday of Professor N.B.TSirel'son. Mias.ind. SSSR 33
[i.e.34] no.2:18 '63. (MIRA 16:4)
(TSirel'son, Noi Borisovich, 1893-)

TSIREL'SON, N.B., prof.; BOGOLYUBOVA, G.V., dotsent; LISITSYN, Yu.P.,
dotsent; RIKARDO, D.I., dotsent; KEROV, M.A.; starshiy
prepodavatel'; YEMEL'YANOV, V.P., assistent; ZOLOTINA, V.A.
assistant

Methods for improving the transportation and keeping of cattle
before slaughtering at meat combines. Zhivotnovodstvo 23
(MIRA 16:2)
no. 6:25-27 Je '61.

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy
promyshlennosti (for Yemel'yanov, Zolotina).
(Slaughtering and slaughterhouses) (Beef cattle--Transportation)

Country	: USSR
Category	: Farm Animals.
	Cattle.
Abs. Jour	: Ref Zhur-Biol., No 21, 1958, 96877
Author	: Rikardo, D. I.; Smirnov, B. A.; Gromykhina, A.
Institut.	: Moscow Technological Institute of Meat and**
Title	: A Rational System of Keeping Calves in the Conditions of Moskowskaya Oblast' during the Pasture Period.
Orig Pub.	: Tr. Mosk. tekhnol. in-ta myasn. i molochn. prom-sti, 1958, vyp. 7, ll2-ll4
Abstract	: No abstract.

Card: 1/1

*H.

**Dairy Industries.

Q-4

USSR/Farm Animals. The Swine

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 50075

Author : Tsirel'son, N.B., Rikardov, D.I., Derevlev
Inst : VASKhNIL [All-Union Academy of Agricultural Sciences imeni
Lenin]
Title : The Influence of BTS [Belen'skiy's Therapeutic Serum] Upon
Weight Gain Increases in Swine During Fattening.

Orig Pub : Dokl. VASKhNIL, 1957, No 7, 35-37

Abstract : Serum obtained from the blood of large horned cattle was injected intramuscularly into the scapula of swine. The first group of animals received 0.25 ml and the second group 0.1 ml doses per 1 kg of live weight. The animals of the third group received hypodermic injections into the ear area 3 times daily with 3 day intervals. Best fattening results (15 kg weight gain per head per month) were obtained when intramuscular injections of the serum were performed during the first month. In order to stimulate fattening, it is

Card : 1/2

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Q-4

USSR/Farm Animals. The Swine

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 50073

Author : Tsirel'son, N.B., Rikardo, D.I., Derevlev A.I.

Inst : -
Title : Belen'kiy's Therapeutic Serum (BTS) in Fattening of Swine
for Meat.

Orig Pub : Zhivotnovodstvo, 1957, No 7, 61-62

Abstract : When Belen'kiy's therapeutic serum (BTS) was used in a 0.1 ml/kg dose 3 times for 10 days preceding fattening and for the first month of fattening, positive results were obtained. From the economic point of view, protein stimulation achieved in subconcentrated fattening procedures is more profitable than in concentrated fattening procedures, even when antibiotics are used.--A.D. Musin

Card : 1/1

57

A. B. m. k. D. 7.
TSIREL'SON, N.B., doktor sel'skokhozyaystvennykh nauk; RIKARDO, D.I.,
kandidat veterinarnykh nauk; DEREVLEV, A.I., kandidat sel'-
skokhozyaystvennykh nauk.

Effect of Belin'kii's therapeutic serum on the addition of
weight to fattening hogs. Dokl. Akad. sel'khoz. 22 no.7:35-
37 '57. (MLRA 10:9)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy
promyshlennosti. Predstavlena akademikom N.G. Belen'kim.
(Serum) (Swine)

NALETOV, N.A., professor; TETERNIK, D.M., professor; RIKARDO, D.I., detsent;
SMIRNOV, B.A., detsent.

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32 no.3:85-90 Mr '55. (MIRA 8:4)
(VETERINARY LABORATORIES)

RIKARDO, D. I.

MD ✓ The effect of biogenic stimuli and some mineral salts on the fattening of young fowl. M. V. Plakhotin, D. I. Rikardo, K. M. Vasilev, A. P. Vinogradova, and A. A. Prevo. *Trudy Moskov. Tekhnol. Inst. Myasnoi i Molochnoi Prom.* 1954, No. 3, 34-8; *Referat. Zhur. Khim., Biol. Khim.* 1955, 4171.—To the ration of leghorn roosters 1-3 months old was added 0.5-1.0 ml. protein pyrolysin, 0.03 g. LiCl, FeSO₄, 14-21 mg. pancreatin and simultaneously a subcutaneous implantation of this supplement was made. Wt. increase and fat accumulation were attained.

B. S. Levine

4

KOZHEVNIKOV, Vasiliy Yakovlevich; KSENZHUK, Ivan Gavrilovich; SHUDYAKOV,
Ivan Ivanovich; GIRSH, I.I., kand.tekhn.nauk, retsenzent;
SIVAY, A.V., dotsent, red.; RIKEBERG, D.B., red.

[Horizontal forging machinery; working principle, design details
and operation] Gorizonta'no-kovochnye mashiny; ustroistvo,
elementy rascheta i obsluzhivanie. Moskva, Gos.nauchno-tekhn.
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(Forging machinery)

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[Paint and varnish coatings; manual] Lakokrasochnye pokrytiia;
spravochnoe rukovodstvo. Moskva, Mashgiz, 1962. 214 p.
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[Guide to safety measures in laying, repairing, and lining
steel-smelting furnaces] Pamiatka po tekhnike bezopasnosti
dlin kamenshchikov po kladke, remontu i obmurovke staleplavil'-
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P.K., inzh., retsenzent; RIKBERG, D.B., red.;
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Georgiy Fedos'yevich; PARFESSA, Galina Ivanovna; ROSSOSHINSKIY,
A.A., kand.tekhn.nauk, retsenzent; MAKAR, A.M., kand.tekhn.nauk,
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znavstva.

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[P 4 1953]

Sensitizing & Sensitotoxicity

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Condensation of α -Aminothiophenol with α -Hydroxy Acids. Alcohols and Ketones of the Benzthiazole Series. V. M. ZUBAROVSKI and M. D. RIKELMAN. *J. Gen. Chem. U.S.S.R.*, 1951, 21, 2199-2205 and 2205-2210.—In the reaction previously described (*Phot. Abs.*, 1953, No. 1328) for the preparation of 2-hydroxymethylbenzthiazole, glycollic acid is replaced by other hydroxy acids. Monobasic acids, e.g., lactic and mandelic, give analogous products: seven of these and their corresponding ketones are described. Malic and tartaric acids give mixtures in which the hydroxy compound is a minor constituent. *J. Soc. Dyers and Col.*

771.534.21: 547.789.6

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24(5), 24(8)

SOV/56-36-6-20/66

AUTHORS: Kucherov, R. Ya., Rikenglaz, L. E.

TITLE: Slipping and Temperature Jump on the Boundary of a Gas Mixture
(Skol'zheniye i temperaturnyy skachok na granitse gazovoy
smesi)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 36, Nr 6, pp 1758 - 1761 (USSR)

ABSTRACT: The corrections connected with the finiteness of the free length of path occur earlier in the boundary conditions than in the equations, and in the transition from hydrodynamic to molecular flow there exists a domain $1/a < 1$ (1 - free length of path, a - the characteristic dimension of the problem) in which these equations may be used, but where the corrections in first order of $1/a$ in the boundary conditions must not be neglected. At high pressures these corrections become considerable. For a single-component gas the corrections to the boundary conditions have already been investigated (Refs 3,4), but a better method was developed by Grad (Ref 5). The authors of the present paper generalize the latter's method for the detection of the corresponding boundary con-

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Slipping and Temperature Jump on the Boundary of a Gas Mixture SOV/56-36-6-20/66

ditions for binary inhomogeneous gas mixtures on the non-absorbing solid surface. The binary gas mixture is described by the general distribution function $f_\alpha(\vec{r}, \vec{\xi}, t)$, which is standardized with respect to the density of the molecules of the α -component (\vec{r} is the radius vector of the molecules, $\vec{\xi}$ - their velocity, and t - time). The external degrees of freedom of the molecules are neglected. The fundamental equations for the macroscopic quantities of the mixture are set up, the relative velocity

$\vec{c} = \vec{\xi} - \vec{u}$ (where \vec{u} denotes the velocity of the local center of mass of the mixture) is introduced, the equations for the moments are written down, and formulas for the partial pressures are derived. The density distribution function is expanded in series with respect to Hermitian vector polynomials and is broken off after the third term. In the following, the plane flow in the y -direction of a gas on the surface $x=0$ is investigated and the boundary conditions are discussed in detail. Formulas are derived which describe the temperature jump on the boundary surface gas mixture - solid body

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Slipping and Temperature Jump on the Boundary of a Gas SOV/56-36-6-20/66
Mixture

(formula(15)), and formula (16) describes the slipping velocity. There are 7 references, 2 of which are Soviet.

SUBMITTED: December 10, 1958

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24(8), 10(2)

SOV/56-37-1-19/64

AUTHORS: Kucherov, R. Ya., Rikenglaz, L. E.

TITLE: On the Hydrodynamic Boundary Conditions in Evaporation and Condensation (O gidrodinamicheskikh granichnykh usloviyakh pri isparenii i kondensatsii)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 37, Nr 1(7), pp 125-126 (USSR)

ABSTRACT: On the basis of the kinetic theory, the authors determine the temperature $T(0)$ and the pressure $p(0)$ over the surface of a liquid or solid phase. The vapor temperature is usually not equal to the temperature T_0 of the liquid surface. In the present paper, the vapor is assumed to be an ideal gas, and the vapor molecules incident upon the liquid surface to have Maxwellian distribution with the temperature T_0 and with the pressure p_0 . The latter assumption is sufficiently fulfilled for monatomic gases, and only such gases are investigated in the present paper. For the matter of simplicity, the authors restrict themselves to the case $v/c \ll 1$, and they investigate the one-dimensional steady vapor current on the plane surface $x = 0$ of a liquid. The x -axis is assumed to be

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On the Hydrodynamic Boundary Conditions in Evaporation and Condensation

directed from the liquid into the vapor. To describe the phase of the vapor, the distribution function $f(x, \xi)$ is introduced,

ξ denoting the molecule velocity in the laboratory system. If the current density of the vapor molecules and the density of the energy current are denoted by $\tau(x)$ and $Q(x)$, the following expression holds at $x = 0$, directly on the liquid surface:

$$\begin{aligned} \tau(0), \tau_0 + \iint_{-\infty}^{\infty} d\xi z d\xi y \int_{-\infty}^{\infty} \xi_x f(0, \xi) d\xi_x, Q(0) = \\ = Q_0 + \frac{m}{2} \iint_{-\infty}^{\infty} d\xi z d\xi y \int_{-\infty}^{\infty} \xi_x \xi^2 f(0, \xi) d\xi_x. \end{aligned}$$

τ_0 and Q_0 denote the molecule current density and the energy current density of the vapor molecules emitted by the liquid.

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Under the above conditions, $\tau_0 = p_0 / \sqrt{2\pi mkT_0}$ and $Q_0 = 2kT_0 \tau_0$.

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On the Hydrodynamic Boundary Conditions in Evaporation and Condensation

The distribution function in the approximation of the "13 moments" is used for calculating $\tau(0)$ and $Q(0)$. In this way, the following relations are found:

$$\tau(0) = 2 \left\{ p_0 \sqrt{2\pi mkT_0} - p(0)/\sqrt{2\pi mkT(0)} \right\}$$

$Q(0) = 2 \left\{ p_0 \sqrt{2kT_0/\pi m} - p(0)\sqrt{2kT(0)/\pi m} \right\}$. Thus, the particle currents and energy currents at $v/c \ll 1$ are equal to double the difference of the corresponding Maxwell currents directed from the surface and towards the surface. The appearance of factor 2 is caused by the fact that in the determination of the current falling upon the surface the Maxwellian distribution function for a resting gas was always used as zeroth approximation of the distribution function, whereas in this case the Maxwellian distribution function for a moving gas should be used. After some arithmetical operations, the following expressions are obtained for the temperature and pressure of the vapor on the surface: $T(0)/T_0 = 1 - Q(0)/2Q_0 + \tau(0)/2\tau_0$, $p(0)/p_0 = 1 - Q(0)/4Q_0 - \tau(0)/4\tau_0$. At $S/p\tau \gg 1$,

the former of these 2 formulas passes into the known formula

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On the Hydrodynamic Boundary Conditions in Evaporation and Condensation

for the temperature jump on a nonabsorbent surface. In the second limiting case $S/p\tau \ll 1$, if the convective transfer of heat is much larger than the molecular transfer, $T(0)/T_0 = 1 - \tau(0)/8\tau_0$, $p(0)p_0 = 1 - 9\tau(0)/16\tau_0$. The last-mentioned 4 equations may serve as boundary conditions for the hydrodynamic equations in evaporation and condensation. The authors thank M. I. Kaganov for a useful discussion, and Yu. A. Shuander for his interest in the present paper. There are 4 references, 2 of which are Soviet.

SUBMITTED: January 15, 1959

Card 4/4

24.5000, 24.5200, 24.5300, 24.5400

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SOV/56-37-6-47/55

AUTHORS: Kucherov, R. Ya., and Rikenglaz, L. E.

TITLE: Letter to the Editor. Jump in the Concentration During a Slow Evaporation of a Mixture

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki,
1959, Vol 37, Nr 6, pp 1821-1822 (USSR)

ABSTRACT: Equations were derived describing the concentration, temperature, and pressure in the gas phase during slow evaporation of a mixture. The following assumptions were made: (1) the rate of the evaporation is small in comparison with the rate of evaporation under vacuum; (2) the molecules of all mixture components are monoatomic; (3) the coefficients of condensation and accommodation are equal to one; (4) the vapor behaves like an ideal gas. The following relations were obtained for a two-component mixture:

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Letter to the Editor. Jump in the
Concentration During a Slow Evapora-
tion of a Mixture

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$$\tau_i(0) = 2 \left[\tau_{i0} - \frac{p_i(0)}{\sqrt{2\pi m_i k T(0)}} \right],$$

$$Q(0) = 2 \left[Q_0 - \sqrt{\frac{2kT(0)}{\pi}} \sum_{i=1}^2 p_i(0) / V \bar{m}_i \right].$$

Here, $\tau_i(0)$ is density of the i^{th} -component of the mixture; τ_{i0} is density of vapor molecules of i^{th} -component; for the explanation of the remaining symbols the reader is referred by the authors to their previous works (cf., Zhur. eksp. i teoret. fiz., 37, 125, 1959; ibid., 36, 1758, 1959). The partial pressure and temperature of the vapor near the surface of the liquid was shown to be:

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$$p_i(0) = \left\{ \frac{\pi m_i [Q_0 - Q(0)/2]}{\tau_0 - \tau(0)/2} \right\}^{1/2} (\tau_{i0} - \tau_i(0)/2), \quad (2)$$

Letter to the Editor. Jump in the
Concentration During a Slow Evapora-
tion of a Mixture

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$$T(0) = T_0[1 + \tau(0)/2\tau_0 - Q(0)/2Q_0].$$

There are 3 Soviet references.

SUBMITTED: June 12, 1959

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KUCHEROV, R.Ya.; RIKENGLAZ, L.E.

Measurement of the condensation coefficient. Dokl.AN SSSR 133
no.5:1130-1131 Ag '60. (MIRA 13:8)

1. Predstavleno akademikom A.P. Frumkinyem.
(Condensation)

22781

24.2700 (1043,1114)
26.2532

S/057/61/051/005/012/020
B104/3205

AUTHORS: Kaganov, M. I., Kucherov, P. Ya., and Rikenglaz, L. E.

TITLE: Kinetic theory of a low-pressure plasma thermocouple

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 5, 1961, 588-596

TEXT: The kinetic theory of a plasma thermocouple has been studied on the assumption that the mean free path of electrons and ions is much larger than the instrumental dimensions, and that the potential between anode and cathode changes monotonically. If, in the space between the electrodes, there exists no negative potential relative to the cathode, the current will be saturated. This mode of operation is called the mode of operation of total compensation, and the principal problem here is to establish proper conditions for obtaining total compensation and to study the potential distribution in the space between the electrodes. A knowledge of this distribution is required for plotting the converter characteristic. The set of equations

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$$\left. \begin{aligned} u \frac{\partial f_e}{\partial x} + \frac{e}{m_e} \frac{dV}{dx} \frac{\partial f_e}{\partial u} &= 0, \\ u \frac{\partial f_i}{\partial x} - \frac{e}{m_i} \frac{dV}{dx} \frac{\partial f_i}{\partial u} &= 0, \\ \frac{d^2 V}{dx^2} &= 4\pi e (n_e - n_i), \end{aligned} \right\} \quad (2)$$

describes the steady distribution of the potential V . It consists of the kinetic equations for the electron and ion distribution functions and of Poisson's equation. In establishing the boundary conditions for the distribution functions the authors show that the electron current from the anode is negligible. Thus, the boundary conditions have the form

$$f_e(0, u > 0) = \frac{m_e}{ekT_1} I_e^{(1)} \exp\left(-\frac{m_e u^2}{2kT_1}\right), \quad (4)$$

$$f_e(L, u < 0) = 0, \quad (5)$$

$$f_i(0, u > 0) = \frac{m_i}{ekT_1} I_i^{(1)} \exp\left(-\frac{m_i u^2}{2kT_1}\right). \quad (6)$$

The ions incident upon the anode leave it as neutral atoms; thus, $f_i(L, u < 0) = 0$. For a potential V monotonically dependent on the coordinates, the solutions

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$$f_e(x, u) = \frac{m_e I_e^{(1)}}{kT_1} \exp\left[\frac{1}{kT_1}\left(-\frac{m_e u^2}{2} + eV\right)\right] \sigma\left[u - \left(\frac{2eV}{m_e}\right)^{1/2}\right], \quad (10)$$

$$f_i(x, u) = \frac{m_i I_i^{(1)}}{kT_1} \exp\left[\frac{1}{kT_1}\left(-\frac{m_i u^2}{2} - eV\right)\right] \sigma\left[u + \left(\frac{2e(V_e - V)}{m_i}\right)^{1/2}\right], \quad (11)$$

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where $\sigma(z) = \begin{cases} 1, & z \geq 0, \\ 0, & z < 0. \end{cases}$

are obtained from (2). These solutions are used to plot the characteristic for the thermocouple without employing Poisson's solution. The

characteristic of the converter is given by $U = \varphi_1 - \varphi_2 + \frac{kT_1}{e} \ln \frac{I_e^{(1)} - I_i}{I_i^{(2)}}$

(14). An analogous equation is found for a monotonic negative potential. It is noted that in both cases $dU/dI < 0$, which requires an additional study of stability. For the determination of those modes of operation for which a monotonic potential exists, Poisson's equation is solved. With the aid of (10) and (11), Poisson's equation is obtained in the form

$$2 \frac{d^2\eta}{dx^2} = \Phi^-(\eta) - \alpha e^{-\eta_a} \Phi^+(\eta_a - \eta). \quad (15)$$

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where

$$\left. \begin{aligned} \eta &= \frac{eV}{kT_1}; & \eta_a &= \frac{eV_a}{kT_1}; & \xi &= \frac{x}{r}; \\ \Phi^\pm(\eta) &= e^\eta (1 \pm \operatorname{erf} \eta^{\alpha}); & \operatorname{erf} z &= 2\pi^{-\frac{1}{2}} \int_0^z e^{-t^2} dt, \end{aligned} \right\} \quad (16)$$

$$r = \left(\frac{k^3 T_1^3}{32\pi^3 m_e e^2 I_0^{(1)}} \right)^{\frac{1}{6}}; \quad \alpha = \frac{I_0^{(1)}}{I_0^{(0)}} \sqrt{\frac{m_i}{m_e}}. \quad (17)$$

This leads to the integral $\xi = \int_0^1 [\eta_0^2 + \varphi(\eta, \eta_a, \alpha)]^{-\frac{1}{2}} d\eta.$ (20)

which describes the potential explicitly. It is seen that ξ grows substantially as η approaches η_a ; therefore, the potential varies only slowly throughout the space between the electrodes. The integration constant η_0^2 is calculated from

$$\eta_0^2 = \frac{1}{c} 2x \eta_a \exp(-\Lambda \sqrt{x}), \quad (24)$$

where

$$x = \frac{1}{2} \varphi''_{\eta\eta}(\eta_a, \eta_a, \alpha),$$

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and τ_k is determined from

$$y_a(\tau_{ik}) \equiv \frac{1}{a} e^{2\tau_{ik}} (1 - \operatorname{erf} \tau_{ik}^{-1}) = 1 + \operatorname{erf} \sqrt{\tau_{ik} - \tau_{ik}} \equiv y(\tau_{ik} - \tau_{ik}), \quad (25)$$

with the aid of a graphical solution. The results obtained here can be easily generalized to the case of a negative potential. A. I. Ansel'm, B. Ya. Mozyhes, and G. Ye. Pikus are mentioned. There are 7 figures and 12 references: 5 Soviet-bloc and 6 non-Soviet-bloc. The two references to English-language publications read as follows: Lewis et al, J.Appl. Phys., 30, 1438, 1959; Houston, J.Appl.Phys., 30, 481, 1959.

SUBMITTED: May 14, 1960

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42218
S/057/62/032/011/011/014
B104/B102

26.10.2010
AUTHORS: Kucherov, R. Ya., Rikenglaz, L. E., and Tsulaya, T. S.

TITLE: The kinetic theory of overcondensation at small temperature differences

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 11, 1962, 1392-1398

TEXT: The transport of a substance between two parallel plates at different temperatures is investigated on the basis of the Boltzmann equation $v_x \frac{\partial f}{\partial t} = (\frac{\partial f}{\partial t})_{st}$ (2). The state of the vapor from the substance of which the two plates are composed is described by the distribution function $f(x, v)$. The collision integral is given in the form:

$$\left(\frac{\partial f}{\partial t} \right)_{st} = \frac{f_{eq} - f}{t}, \quad (2)$$

$$f_{eq} = n \left(\frac{m}{2\pi T} \right)^{3/2} \exp \left[- \frac{m(v-u)^2}{2T} \right]. \quad (3)$$

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